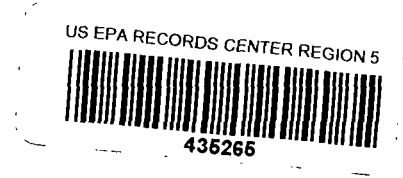


**Gary Development Corporation Landfill
Final Cover Research Results**

Permitted Plans - Rec'd 5/31/73

From "Exhibit No. 2 - Sections and Details":

Applicant will apply 3'-0" min. cover. Minimum slope is 1' per 100'.



Permitted Plans - Rec'd 11/17/80

From Page 8 - "Section-Landfill Construction Procedure":

Applicant will apply minimum 2'-0" compacted clay beginning at the toe of side slopes. At point on side slope where perimeter barrier construction ends, applicant will apply over the rest of the landfill (from bottom up), 24" to 50" of stabilized flyash as admixture, and then 1'-0" minimum of compacted clay. Side slopes range from 2% minimum to maximum 5:1 (H:V).

Pre-Rule 2 Regulations (Effective 1974 to January 1989)

329 IAC 1.5-5-5-13 (c) *"When any portion of a site reaches within two feet of final elevation, compacted final cover shall be applied, not less than two feet in depth. At the termination of operations at a site, final grading shall be done, and the area seeded with suitable vegetation to control erosion."*

Final cover shall have a slope of not less than 2 percent and be without depressions that will cause ponding of water."

Rule 2 Regulations (Effective 1989 to April 1996 - Applies to facilities that close before 1/1/98)

329 IAC 2-14-12 (a) *"Cover for solid waste land disposal facilities shall be soil of Unified Soil Classification ML, CL, MH, CH, or OH, or other suitable material approved by the commissioner to provide an adequate level of environmental protection."*

329 IAC 2-14-12 (1) (A) *"the maximum projected erosion rate of the final cover shall be five (5) tons per acres per year;*

329 IAC 2-14-19 (1) (B) *"the final compacted cover shall have six (6) inches of topsoil plus a minimum depth of compacted clay of two (2) feet for slopes less than or equal to fifteen percent (15%); of three (3) feet for slopes greater than fifteen percent (15%) but less than twenty-five percent (25%); and of four feet for slopes greater than twenty-five percent (25%)", and*

329 IAC 2-14-19 (1) (C) *"the final cover shall have a slope of not less than four percent (4%) and not greater than thirty-three percent (33%)."*

Rule 10 Regulations (Effective April 1996)

329 IAC 10-22-7(c) Final cover system requirements for existing MSWLF units constructed without a soil liner or leachate collection system.

If the landfill is permitted under 329 IAC 1.5 or 329 IAC 2, and closing after January 1, 1998:

1. On slopes equal to or less than 15% the final cover must consist of the following:
 - a. 1 foot of methane venting layer with hydraulic conductivity of $k \geq 1 \times 10^{-3}$ cm/sec;
 - b. 1 foot of structural fill and 1 foot of compacted soil with hydraulic conductivity of $k \leq 1 \times 10^{-6}$ cm/sec;
 - c. Plastic liner (geomembrane such as 60 mile HDPE);
 - d. 1 foot of drainage layer with hydraulic conductivity of $k \geq 1 \times 10^{-3}$ cm/sec;
 - e. 1.5 feet of protective cover
 - f. 6 inches of vegetative layer.
 2. On slopes greater than 15% the final cover must consist of the following:
 - a. 2 feet of compacted soil with hydraulic conductivity of $k \leq 1 \times 10^{-6}$ cm/sec;
 - b. 6 inches of vegetative layer.
 3. The maximum projected erosion rate of the final cover must be no more than five (5) tons per acre.
 4. Final cover slope shall not be less than 4% and no greater than 33%. Cover soil shall be of the Unified Soil Classification ML, CL, MH, CH, or OH.
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